mini Marin sin						·					
Work Ord Tuesday, Septen				*898				Page 1			
Item ID: Revision ID:	D212-664-20	07TRN		Accept	*N900	040	100) *	Setup St	, I.	JS1*
Item Name:	Crosstube Tur	rning Detail							3	top *	125*
Start Date: Required Date:	9/11/2012 : 9/17/2012	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item I Customer:	D:					is ad N
Reference:	•		•								
Approvals:	Process Pla	an:	Date://2-09-/	Tooling:	Da	ate:				art *N	JR1*
	QC:		Date:	SPC (Y/N):	Da	ate:			Si t	* \	IR2*
Sequence ID/ Work Center I	D	Operation Description		Set Up/ • . Run Hours	Tool ID	Tool#	Plan Code	Accept Qty	Reject Qty	Reject Numbe	_
Draw Nbr	Rev	vision Nbr									
D212-664-24	7 Rev	B (DEO)									
100				0.00							
100 Mori Seiki		MORI SEIKI CNC LAT	HE LARGE	0.00					Ø.		10
Mori Seiki CNC La	athe Large	2-Turn first	side as per Folio FA706 sition lines smooth.	DT8534 on both ends as pe	r Folio FA706			• .			12/09
110		QC1- Inspect dimension	s to dimension sheet	0.00					11 de		

110 QC

Memo

Quality Control

0.00

		,	
NCR:	Yes	/	No

WORK ORDER NON-CONFORMANCE / UPDATE

DOA-SWIT	Date:	12/10/03	
	-		. *
ON Closed: (1)	Date:	0	

QA Closed. C Date. 10													
Work Orde	r:	89	85	7		DISPOSITION			AGAINST DE	PARTMENT	PROCESS		
Part N		`	664	-20	TTRN	Rework Scrap Use-as-is Work Order Update	Ther	Skid-tube Machining moforming Large Fab	Crosstube Small Fab Finishing Composite	}	Water Jet Engineering Prod. Eng. Coor. Quality Rec/Store/Packaging Other Supplier		
Root					Descri	otion of work order update	Initial	Actio	on	Sign &			
Cause		Date	Step	Qty	c	or Non-conformance	Chief Eng	Descrip	otion	Date	Verification	QC Inspector	
Doc/Data Equip/Tooling Operator Material Setup Other Process	Κ.	12/4/24	102		2 ml to tol Mass	asures oid of lerance. L= 3.009 ved - 3.004 -3.006	DAG 12/9/24	CP measure Accopteble	cs 3.009	12/9/24	IW 12-9-24	17/02/28	
Supplier Training											·		
Unapproved										<u> </u>		1:	
1 12 -							AULT CAT	EGORY					
Landin	_				· —	General		•		1		7	
	\Box c	ending entre No racks	t Concer	ntric to (o/s	Bend BOM/Route Broken/Damaged	Grain Hardw	are tion Incomplete		Ovalized Over/Under Part Incorre		Pressure/Forced Temperature/Cure Weld	
<u> </u>	—	rushed/0	rimned		<u> </u>	Burrs	├ ── │	tions incomplete/Un	oclear	Part Lost/Mi		Wrong Stock Pulled	
		uffs	impeu.		<u> </u>	Contamination	—	enance	icleal	Part Moved	33111g	I wrong stock runed	
		eat Treat	:			Countersink	Mislab		<u> </u>	Positioned V	Vrong		
	├					Cut Too Short	Misrea			Power Loss/		Other	
				Drill Holes	Offset			-	not Stright				
Torque Waves in Extrusion Drawing				Drawing	${f H}$	Calibration		TIVE					
Turning Sequence Finish				i *	Out of Sequence								
Wave/Twist in Tube						Folio	Outsid	Outside Dimensions					

Work Ord Tuesday, Septen				*898				Page 2				
Item ID: Revision ID:	D212-664-2	207TRN		Accept	*N900	<u> </u>	100)*	Setup		*N.	S1*
Item Name:	Crosstube Tu	rning Detail								Stop	*N:	S2*
Start Date:	9/11/2012	Start Qty: 1.00	*1*		Cust Item	ID:						
Required Date Reference:	: 9/17/2012	Req'd Qty: 1.00	*1*		Customer	:						·
Approvals:	Process Pl	an:	Date:	Tooling:		Date:				Start	*NI	२ 1*
	QC:		Date:	SPC (Y/N):]	Date:				Stop	*NI	R2*
Sequence ID/ Work Center I	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reje Qty		Reject Number	Insp. Stamp
120				0.00								
120		MORI SEIKI CNC LAT	THE LARGE									
Mori Seiki		Memo		0.00								
Mori Seiki CNC La	athe Large	2- File trans										mark 12/09/11
130		QC1- Inspect dimension	ns to dimension sheet	0.00								
130												
QC		Memo		0.00								aml
Quality Control		÷									<u>.</u>	9ngml
140		QC8- Inspect parts - sec	cond check	0.00	,			ر				
		QCo- mspect parts - sec	ond oncer	· ·				$\overline{\mathcal{I}}$		(
*14 ∩ *		Memo		0.00	•			\sim ω		16	-9-21	1

Memo

Quality Control

									DQA:	Date:	
NCR: Yes	s / No				WORK ORDER NON-C	ONFORM	MANCE / UP		QA Closed:	Date:	
Work Order:					DISPOSITION			AGAINST DE	PARTMENT	/PROCESS	
Part No.				,	Rework Scrap Use-as-is	Thern	Skid-tube Machining noforming	Crosstube Small Fab Finishing		Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other
NCR No.	•				Work Order Update		Large Fab	Composite		Supplier	
Root				Descri	ption of work order update	Initial	Ac	tion	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Chief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data											
Equip/Tooling]										•
Operator]	1			•				-		
Material		İ									
Setup											
Other]									,	
Process]										
Supplier											
Training		ŧ		1							

			FAUL	LT CATEGORY		
Landing	Gear	General				
	Bending	Bend		Grain	Ovalized	Pressure/Forced
	Centre Not Concentric to O/S	BOM/Route		Hardware	Over/Under tolerance	Temperature/Cure
	Cracks	Broken/Damaged		Inspection Incomplete	Part Incorrect	Weld
	Crushed/Crimped.	Burrs		Instructions Incomplete/Unclear	Part Lost/Missing	Wrong Stock Pulled
	Cuffs	Contamination		Maintenance	Part Moved	
	Heat Treat	Countersink		Mislabeled	Positioned Wrong	
	Inspection Strip in Tube	Cut Too Short		Misread	Power Loss/Surge	Other
	Ripples in Bend	Drill Holes		Offset		
	Torque Waves in Extrusion	Drawing		Out of Calibration		
	Turning Sequence Finish			Out of Sequence	<u> </u>	
	Wave/Twist in Tube	Folio		Outside Dimensions		

Unapproved

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Quality Control

89856

Page 3

Tuesday, September 11, 2012 3:45:47 PM *N900040100* D212-664-207TRN Accept Item ID: Setup Start **Revision ID:** Crosstube Turning Detail Item Name: **Start Date:** 9/11/2012 Start Qty: 1.00 **Cust Item ID: Required Date: 9/17/2012 Req'd Qty:** 1.00 **Customer:** Reference: Run Date: **Tooling:** Process Plan: Date: **Approvals:** Stop Date:_____ SPC (Y/N): QC: Date: Sequence ID/ **Tool ID** Tool # Plan Reject Reject Operation -Set Up/ Accept Insp. Description Code Qty Qty Number Stamp **Work Center ID Run Hours** 145 0.00 *145* 0.00 Crosstubes Memo GRIND ONLY TRANSITION LINES SMOOTH LONGITUDE WAY. Crosstubes 0.00 150 *150* 0.00 HandFXtube Memo 1- PRESSURE WASH X-TUBE INSIDE AND OUT Hand Finishing Crosstubes 2- ACID ETCH X-TUBE INSIDE AND OUT. USE RED SCOTCH BRITE QC5- Inspect part completeness to step on W/O 0.00 160 *160* 0.00 QC Memo

NCR:	Yes	/	No

												DQA:	Date	e:		
NCR:	⁄es	/ No		;			WORK ORDER NON-C	O	NFOR	MANCE / UPDATE	_					
				•		-				· · · · · · · · · · · · · · · · · · ·	- 0	(A Closed:	Date	<u>e:</u>		
Nork Ord	er:				•		DISPOSITION									
Part I							Rework Scrap]	Skid-tube Crosstube Machining Small Fab				Water Jet d. Eng. Coor.		Engineering Quality	
NCR I	No.						Use-as-is Use-as-is Work Order Update			noforming Finishing Large Fab Composite		Rec/Stor	re/Packaging Supplier		Other	
Root					Desc	crip	tion of work order update	I	nitial	Action		Sign &	!	\Box		
Cause		Date	Step	Qty		o	r Non-conformance	Ch	ief Eng	Description		Date	Verification		QC Inspector	
oc/Data																
quip/Tooling	L															
perator	<u> </u>															
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rocess										, in the second second			÷			
upplier	_							1		·						
raining																
Inapproved		<u> </u>	<u> </u>					<u> </u>								
								AUL	T CATE	GORY						
Landi	ng (1			r		General		1	,			Г		<u>.</u>	
	_	Bending				_	Bend	<u> </u>	Grain			Ovalized	_		Pressure/Forced	
	L	Centre No	ot Concer	ntric to	O/S		BOM/Route	<u> </u>	Hardwa		—	Over/Under	-		Temperature/Cure	
	_	Cracks			}		Broken/Damaged	<u>_</u>	1	ion Incomplete		art Incorre			Weld	
	_	Crushed/0	Crimped.		- 1		Burrs	<u></u>	-	tions Incomplete/Unclear	$\boldsymbol{\vdash}$	Part Lost/Mi	issing		Wrong Stock Pulled	
	<u> </u>	Cuffs			- 1		Contamination	<u>_</u>	Mainte			Part Moved				
	Heat Treat Countersink							-	Mislabe		\vdash	Positioned V			1	
	<u> </u>	Inspection		Tube			Cut Too Short	<u></u>	Misread	d	F	Power Loss/	'Surge	Other		
	<u> </u>	Ripples in					Drill Holes	\vdash	Offset		_			_		
	_	Torque W			n		Drawing	<u></u>	4	Calibration	_					
	1	Turning S	equence				Finish	1	Out of 5	Sequence						

Outside Dimensions

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Wave/Twist in Tube

Folio

Work Order ID 89856 *89856* Page 4 Tuesday, September 11, 2012 3:45:47 PM Item ID: D212-664-207TRN Accept *N900040100* Setup Start **Revision ID:** Item Name: Crosstube Turning Detail Start Date: 9/11/2012 Start Oty: 1.00 **Cust Item ID:** Required Date: 9/17/2012 **Rea'd Oty:** 1.00 **Customer:** Reference: Run Tooling: Process Plan: Date: Date: **Approvals:** Stop SPC (Y/N): Date: Date: OC: Tool ID Tool # Plan Reject Reject Sequence ID/ Operation Set Up/ Accept Insp. Oty Oty Work Center ID Description Run Hours Code Number Stamp 170 0.00 12-9-27 Packaging M *170* 0.00 Packaging Memo Identify and stock in kanban rack Packaging Location: Lacation OC21- Final Inspection - Work Order Release 0.00 180 *120* 0.00

Memo

Quality Control

												DQA:	Date	:			
NCR:	/es	/ No					WORK ORDER NON-O	COI	VFORM	MANCE / UPD	ATE						
						_			<u></u>			QA Closed:	Date	:			
Nork Orde	er:						DISPOSITION				AGAINST DE	AINST DEPARTMENT/PROCESS					
Part N	•				· .		Rework Scrap Use-as-is		ſ	Skid-tube Crosstube Water Machining Small Fab Prod. Eng. Co				Engineering Quality Other			
NCR I	۱o. ِ						Work Order Update]		Thermoforming Finishing Rec/Store/Packaging Large Fab Composite Supplier				J			
Root					Des	crip	otion of work order update	1	nitial	Acti	on	Sign &					
Cause		Date	Step	Qty		C	r Non-conformance	Ch	Date	Verification	QC Inspector						
oc/Data quip/Tooling Derator Material etup Other Process upplier Training																	
			1	l	· · · · · · · · · · · · · · · · · · ·		F	AUL	T CATE	GORY		<u>I</u>					
Landi	ng (Gear					General										
		Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend BoM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes						Instruct Mainte Mislabe Misread Offset	on Incomplete ions Incomplete/U nance iled	Inclear	Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	ssing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other				
	Torque Waves in Extrusion Drawing Out of Calibration Turning Sequence Out of Sequence																

Outside Dimensions

Wave/Twist in Tube

Folio

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Picklist Print

Tuesday, September 11, 2012 3:45:52 PM

Work Order ID: 89856

89856

Parent Item:

D212-664-207TRN

D212-664-207TRN

Parent Item Name: Crosstube Turning Detail

Start Date: 9/11/2012

Required Date: 9/17/2012

Page 1

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev:A New Issue 08-03-06 DD verified by:ec IPP Rev B 08.04.02 Removed polish EC verified DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch		Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6008-132		Manufactured	No			110	Each	0.0000	1	1			
	1.								طدط				

D6008-132

Crosstube extrusion

D6008-180

59249

mm. 6 12/69/14

	,	*.	4			r *	7				DQA:	Date:	•
NCR: Ye	s / No		. 3	- -	WORK	ORDER NON-	CÓI	VFOR	MANCE / UPE	DATE	•		
						·				· · · · · · · · · · · · · · · · · · ·	QA Closed:	Date:	
Work Order			,	The same		DISPOSITION	j.			AGAINST DE	PARTMENT	PROCESS	
	Part No. Scrap Machining Sn									Crosstube Small Fab Finishing	-1	Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other
NCR No	NCR No. Work Order Update Large Fab Composite]	Supplier	
Root				Desc		ork order update		nitial	Acti	ion	Sign &		
Cause	Date	Step	Qty		or Non-cor	nformance	Ch	ief Eng	Descr	iption	Date	Verification	QC Inspector
Doc/Data													
quip/Tooling						6. A. C.		'.'ae		4			
Operator					:								
Material	_	1		• •									
ietup													
Other	_	ł			ي مي آنه معنوش د	air			-*:- :				
Process	_			τ.		•							
Supplier	_			•									
raining	_[.*		.*,~					
Jnapproved		L	لــــا		<u> </u>	· · · · · · · · · · · · · · · · · · ·	<u> </u>			·			
• • •					7 F ± .		·AUL	T CATE	GORY				
Landing				Г	_	General].	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		٦		ا ، ، ا
-	Bending				Bend		10.00	Grain	e Santana		Ovalized	., -	Pressure/Forced
-	Centre No	ot Concer	ntric to (7/2" -4	BOM/Ro	2	None	Hardwa		· -	Over/Under	ļ -	Temperature/Cure
⊦	Cracks	C		: }	Broken/E	amaged	-	1	ion incomplete	1.2.1.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2	Part Incorred	ļ	Weld
-	Crushed/Crimped Burrs							4	tions Incomplete/L	nciear	Part Lost/Mi	issing	Wrong Stock Pulled
-	Cuffs Contamination Heat Treat Countersink						·	Mainte		├ -	Part Moved	\	***
-	Heat Trea		Tubo	<u>.</u>	<u>-</u>		\vdash	Mislabe Misrea		<u> </u>	Positioned V Power Loss/	_	Other
Inspection Strip in Tube A Cut Too Short Ripples in Bend Drill Holes							+	Offset	u	. L	rower coss/	ourge	Other
-	Torque W		vtrucio	,	Drawing	: 3	1	19 ye	Calibration	•			
	Turning So			'	Finish		1		Sequence	•			
<u> </u>	Wave/Tw			- -	Folio		-	4.	Dimensions		:		
	Ivvave/ IW	ist iii TUL	75	1	ורטווט		1	Jourside	: vimensions	•			

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DART AEROSPACE LTD	Work Order:	89856
Description: Crosstube Assembly (205/212 Low Aft)	Part Number:	D212-664-247
Inspection Dwg: D212-664-247 Rev: B		Page 1 of 2

FIRST ARTICLE INSPECTION CHECKLIST

Inspection Sheet Drawing Dimension		Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments	
	0.438	+/-0.010	1434			vera	CWC-DO	
	2.680	+0.005/-0.000	2.681			(
	2.680	+0.005/-0.000	2.683					
	2.687	+0.005/-0.000	2.691				·	
	2.802	+0.005/-0.000	2.867					
	2.906	+0.005/-0.000	2.910	7.				
EA	3.009	+0.005/-0.000	3.013	/				
SIDE	3.112	+0.005/-0.000	3.114	_				
100	3.250	+0.005/-0.000	3.250	1			3.	
					-			
	0.438	+/-0.010	438			Leva	[WL-08	
	2.680	+0.005/-0.000	2.682			~	1000	
	2.680	+0.005/-0.000	2-684	/		()		
	2.687	+0.005/-0.000	2.692					
	2.802	+0.005/-0.000	2.807	/	<u> </u>			
	2.906	+0.005/-0.000	2-911	5	<u> </u>			
E B	3.009	+0.005/-0.000	3.011					
SIDE	3.112	+0.005/-0.000	3.115					
٠,	3.250	+0.005/-0.000	3.250			T.		
	128.268	+/-0.030	128.27			tape	66-22	

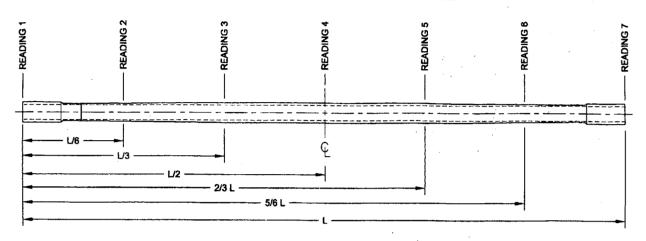
				DQA:	: Date:	:
ICR·	Yes /	No WORK ORDER NON-CONFORMANCE	/ UPDATE			

	,							,		QA Closed:	Date	:
Work Orde	er.				DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part N					Rework Scrap			Skid-tube Machining	Crosstube Small Fab	Pro	Water Jet d. Eng. Coor.	Engineering Quality
NCR N	lo				Use-as-is Work Order Update		Thermoforming Finishing Rec/Store/Packaging Other Large Fab Composite Supplier				Other	
Root Desc				Descri	ption of work order update	In	itial	Ac	tion	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Chie	ef Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data	*											
Equip/Tooling					·							
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Setup												
Other					l							
Process	1 .											
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Training												
Unapproved												
					F	AULT	CATE	GORY				
Landir	ng Gear				General				<u> </u>	_		
	Bending				Bend		Grain		·	Ovalized		Pressure/Forced
	Centre No	ot Conce	ntric to (o/s	BOM/Route		Hardwa	re	. [Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged		nspecti	on Incomplete		Part Incorre	ct	Weld
	Crushed/	Crimped.			Burrs		nstruct	ions Incomplete/	Unclear	Part Lost/M	issing	Wrong Stock Pulled
	Cuffs				Contamination		Mainte	nance		Part Moved		
	Heat Trea	at			Countersink		Mislabe	led		Positioned \	Wrong	
	Inspectio	n Strip in	Tube		Cut Too Short		Misread	i		Power Loss/	'Surge	Other
Į	Ripples in	Bend			Drill Holes		Offset					
· [Torque W	/aves in E	extrusio	n [Drawing		Out of C	Calibration				
	Turning S	equence			Finish		Out of S	Sequence	* *			
Wave/Twist in Tube				Folio		Outside Dimensions						

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DART AEROSPACE LTD	Work Order:	8.9.8.5 G
Description: Crosstube Assembly (205/212 Low Aft)	Part Number:	D212-664-247
Inspection Dwg: D212-664-247 Rev: B		Page 2 of 2

WALL THICKNESS MEASUREMENT



	WALL	THICKNESS !	Deviation				
Location	w1	w2	w3	w4	Δw (max-min)	TOLERANCE	
READING 1 L= 0"	.151	.165	.158	149	.016		
READING 2 L= 16	.220	-210	. 227	228	.010		
READING 3	.409	.409	.399.	,399.	.010		
READING 4	. 447.	.432	,439	.434	,015	0.054"	
READING 5	.406	.410	404	401	,069		
READING 6	. 218	.212	. 225	. 237,	.020	:	
READING 7 L= CUff	.165	.161	.141	.143	.024		

Calibration Result

Actual Block Thickness: 100-500

Sitescan 250 Measured Thickness: 100~1500

Measured by: Amm.	Audited by:	Preliminary Approval:	
Date: 12/09/14	Date: 17-9-24	Date:	

Rev	Date	Change	Revised by	Approved
Α	08.11.07	New Issue (P/O D212-664-207)	KJ/EC	
В	10.04.01	Dwg Rev updated	KJ	
С	10.08.03	Dimension 128.268 was 128.27	KJ 10	11
D	12.06.04	Wall thickness form added	KJ O	134

NCR:	Yes / No	WORK ORDER

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: ____

iven.	C3	7 140					WORK ORDER ROR-C	.01	• • • • • • • • • • • • • • • • • • •	MANUE / OF D		QA Closed:	Date:	
Nork Orde	r.	,					DISPOSITION				AGAINST DE	PARTMENT/	PROCESS	
Part No.					Rework Scrap		Skid-tube Crosstube Machining Small Fab		Water Jet Prod. Eng. Coor.		Engineering Quality			
NCR N	0.						Use-as-is Work Order Update			noforming Large Fab	Finishing Composite	Rec/Stor	e/Packaging Supplier	Other
Root					Desci	rip	tion of work order update	١	nitial	Acti	on	Sign &		
Cause		Date	Step	Qty		O	Non-conformance	Ch	ief Eng	Descri	iption	Date	Verification	QC Inspector
oc/Data														
quip/Tooling														
perator					!									
laterial	_	ļ												
etup														
ther														
rocess														
upplier				,				İ	;					
raining														
napproved					<u> </u>			<u> </u>						
							F/	AUL	T CATE	GORY				
Landir	ıg G	Gear			_		General					-		_
		Bending				—	Bend		Grain		·	Ovalized		Pressure/Forced
		Centre No	t Concer	ntric to	o/s		BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
		Cracks			L	╝	Broken/Damaged		Inspecti	on incomplete		Part Incorred	ct	Weld
		Crushed/0	Crimped.			╛	Burrs		Instruct	ions Incomplete/U	Inclear	Part Lost/Mi	ssing	Wrong Stock Pulled
		Cuffs				╝	Contamination		Mainte	nance		Part Moved		
		Heat Trea	t				Countersink		Mislabe	led		Positioned V	Vrong	_
[Inspection	Strip in	Tube			Cut Too Short		Misread	i		Power Loss/	Surge	Other
Ripples in Bend Drill Holes			Drill Holes		Offset									
		Torque W	aves in E	xtrusio	n [Drawing		Out of (Calibration				
[Turning Se	equence				Finish		Out of S	Sequence				
	Wave/Twist in Tube				\neg	Folio		Outside	Dimensions					

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		757		
ltem	Qty -247	Qty -247B	Part Number	Description
1	X	l	D212-664-247	CROSSTUBE ASSEMBLY (205/212 LOW AFT)
2		Х	D212-664-247B	CROSSTUBE ASSEMBLY (214 LOW AFT)
3	 		D6008-132	CROSSTUBE
3		- :-		
4	2	2	D2940-1	SUPPORT
5	4	4	D3595-063-530	RUBBER CUSHION
6	2	2	D3660-1	CUFF
7	4	4	MS21920-28	CLAMP (OR MS21920-30)
8	44	44	CR3212-4-06	RIVET (OR M7885/3-4-06)
9	A/R	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE
9	AVK	~~	MAGNOBOND 0390	(TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)
10	A/R	A/R	SIKAFLEX-241/-291	SEALANT (OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT)

GENERAL NOTES:

n

В

- 1) MATERIAL: MANUFACTURED FROM D6008-132
- FINISHED LENGTH = 128.268±0.020 (BEFORE BENDING/TRIMMING)
- FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
 PAINT OUTSIDE PER DART QSI 005 4.2
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- UNITS: INCHES UNLESS OTHERWISE NOTED.
- BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
 IDENTIFICATION: SCRIBE DART PART NUMBER "D212-664-XXX" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- WEIGHT: D212-664-247 = 36.6 lbs (PER IIN-D212-664)
- D212-664-247B = 36.6 lbs (PER IIN-D212-664)
- PART IS SYMMETRIC ABOUT CENTERLINE.
 WHEN MACHINING TAPER, RUN CUTTER OFF PART. BLEND OUT EDGE LONGITUDINALY, TRANSITION SHOULD
- BE SMOOTH.

 10) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON 0.D, EXCEPT UP TO 10% IS ALLOWED IN AREA NOTED.

 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.

 12) INSTALL D2940-1 SUPPORT USING 0.03* TO 0.05* THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF
- D2940-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS AFTER
- INSTALLATION AND PRIOR TO PACKAGING.

 13) INSTALL MS21920-28 CLAMPS (OR 30) WITH D3595-083-530 RUBBER CUSHIONS TO SECURE THE D2940-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE OF CROSSTUBE SUPPORT.

 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005' MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.
- NOT BOTTOMELPOUT AFTER TORGOING.

 16) INSTALL D3660-1 CUFF AFTER CHEMICAL CONVERSION COAT BUT BEFORE PAINT, WITH A LAYER OF SIKAFLEX-241/-291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT BETWEEN CUFF AND CROSSTUBE. SEAL EDGE OF CUFF TO ENSURE NO GAPS.
- 17) TOUCH-UP HOLES WITH CHEMICAL CONVERSION COAT.

DEO ATTACHED

560# 11-614 UNDER REVIEW

В		GENERAL N	RF	09.09.30				
Α	NEW IS	SUE		CP	07.07,07			
REV.			DESCRIPTION	BY	DATE			
DESIGN		P	DART AEROSP	ACE	LTD			
DRAWN		RF	HAWKESBURY, ONTARIO, CANADA					
CHECK	Đ	97	DRAWING NO.		REV. B			
MFG. AF	PR.	187	D212-664-247		SHEET 1 OF 4			
APPRO!	VED	10	TITLE		SCALE			
DE APP	R.	4	CROSSTUBE (205/212 LOV	V AFŤ)	NTS			
DATE	09.0	9.30	COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CHYDRUTHAL AND IS SUPPLED ON THE CORRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PARPOSE OR COMPANDATE TO THE PERSON WITHOUT WITHOUT PERSON WITHOUT					

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Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Power Loss/Surge

Other

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

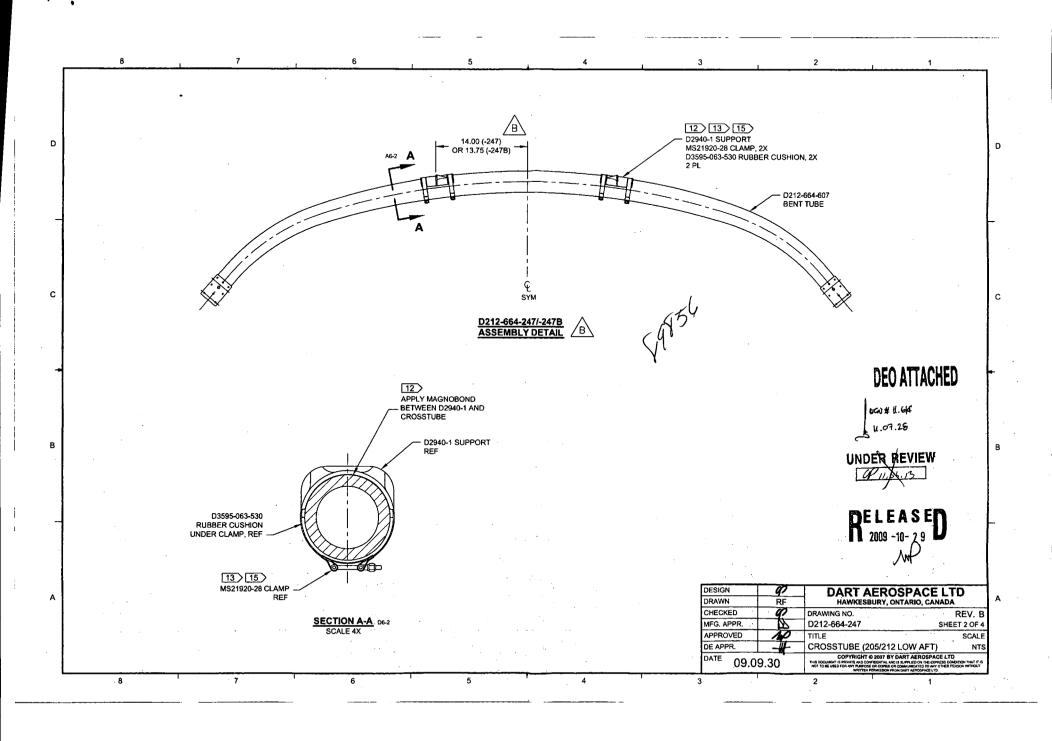
Drill Holes

Drawing

Finish

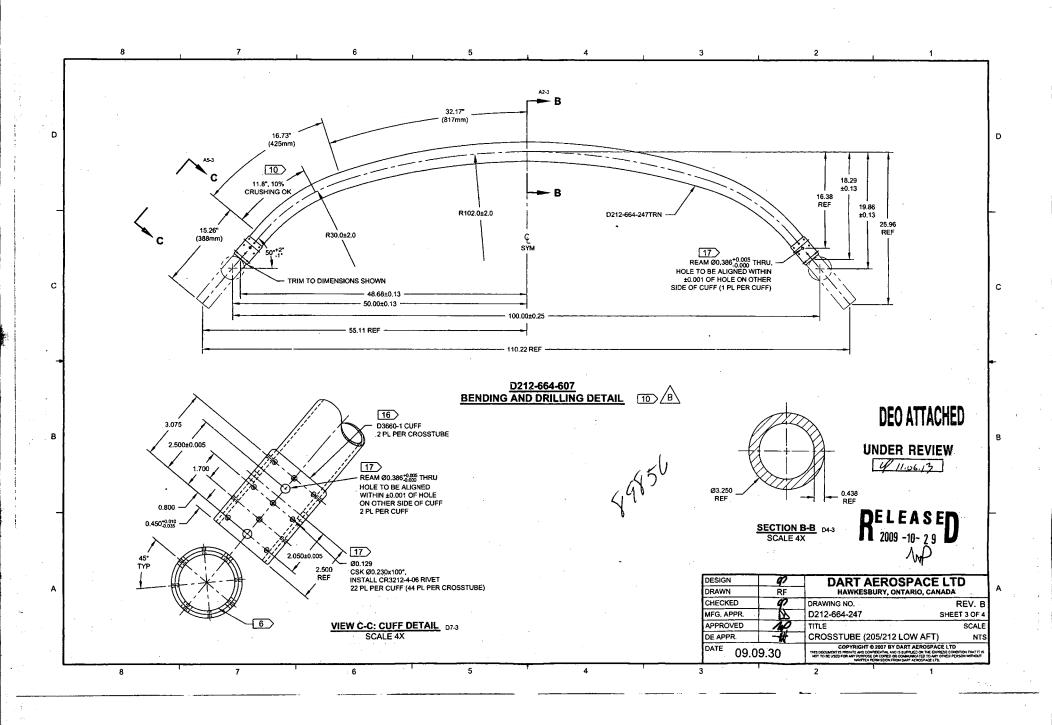
Folio

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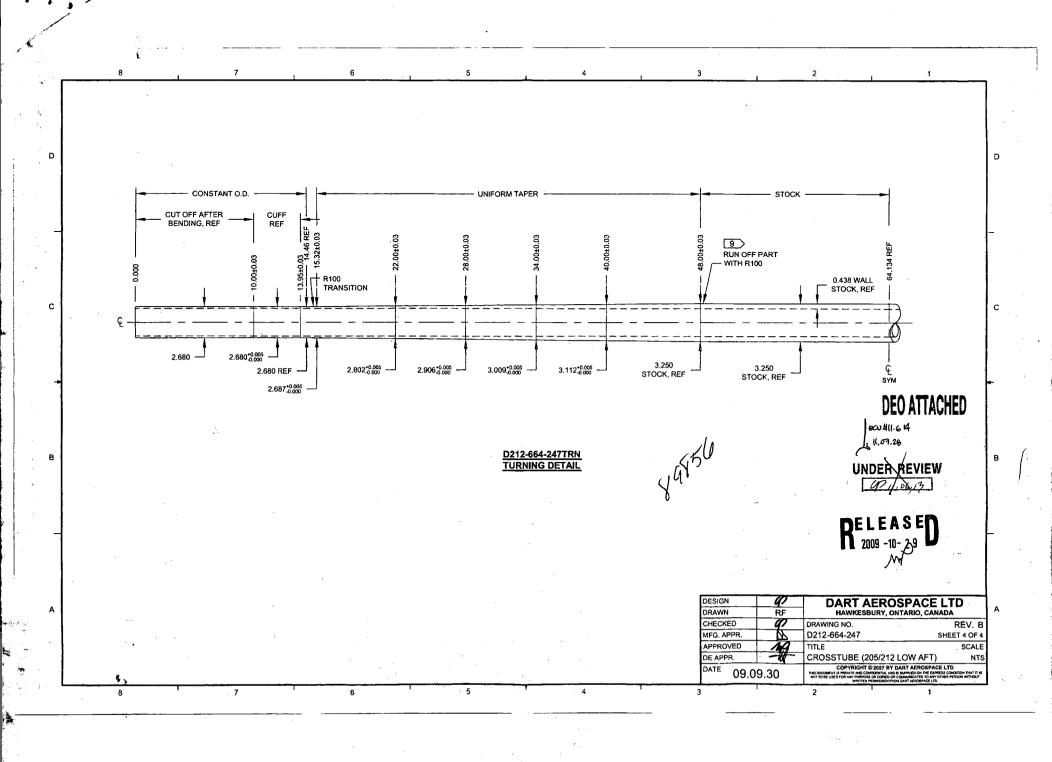


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	Wav	e/Twi	st in Tub	e	Ī		Folio		Outside	Dimensions					

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	Wave/Twist in Tube						Folio			Outside Dimensions					

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DRAWING NO.	TITLE	REV. B		ROSPACE LTD	D.E.O. NO.		SHEET NO.	SCALE
	CROSSTUBE ASS'Y (20	5 LOW AFT)	ENGINE	ERING ORDER	D212-664-24	7-B-1	SHEET 1 OF 1	NTS
DRAWN q	CHECKED	A>5	MFG. APPR.		APPROVED _	(VI)	DE APPR.	
DATE 11.07	.15 DATE //.	27.70	DATE	11.07.21	DATE 11/z	7/21	DATE 11.07.	21

PURPOSE:

REPLACE MAGNOBOND WITH PROSEAL.

CHANGE:

IS:

ltem	Qty -247	Qty -247B	Part Number	Description
9	A/R	· A/R	PROSEAL 890 B-2	SEALANT, AMS-S-8802 CLASS B-2

WAS:

9	A/R	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023
				ADHESIVE (TEXTRON/BELL SPEC, 299-947-100,
				TYPE II, CLASS 2 ADHESIVE)

NOTE 12 & 15, SHEET 1 IS AMENDED AS FOLLOWS:

IS:

- 12) TO INSTALL D2940-1 SUPPORT: ABRADE MATING SURFACE OF SUPPORT AND CROSSTUBE WITH 180-GRIT SANDPAPER AND REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY A 0.04" TO 0.07" THICK LAYER OF PROSEAL 890 CLASS B-2 (OR AMS-S-8802 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 890 SEALANT HAS CURED FOR 72 HOURS.

WAS:

- 12) INSTALL D2940-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2940-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

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TO BE USED FOR ANY PURPOSE OR CONFIDENCE ATE ON A CONTINUATED TO ANY PURPOSE OR CONFIDENCE OR COMPUTATED TO ANY OTHER PERSON WITHOUT

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